

REMARKS

Claims 1, 3-6, 9, 15-16, 18-19, 21-23, 26, 28-31, 33, 39-41, 44-46, 49, 53-54, 63 and 66 are rejected under 35 U.S.C. §103(b) as being anticipated by Bunte, et al., U.S. Patent No. 5,873,070. The remaining claims pending in the claims are rejected under 35 U.S.C. §103(a) over a combination of various references. Claims 8, 10, 13, 25, 32, 34, 37, 48, and 50 are rejected over a combination of Bunte, et al. with Anderson, et al., U.S. Patent No. 7,283,635, and Michel, et al., U.S. Patent No. 5,764,512. Claims 11-12, 27, 35-36, and 51-52 are rejected under §103(a) over Bunte, et al./Anderson, et al./Michel, et al., as further modified by Hallikainen, et al., U.S. Patent No. 5,797,102. Claims 14 and 38 are rejected under the same three-reference combination, as modified by Helms, U.S. Patent No. 5,561,710.

Rejections Under 35 U.S.C. §102(b)

In rejecting the currently-pending claims, the Examiner has now found another new main reference in the form of Bunte, et al. Specifically, the Examiner refers to the “key word” aspects of the Bunte, et al. reference requiring that a user speak the key word, such as their name, in order to select different dictionaries or templates. However, in that aspect of Bunte, et al., the users are essentially required to still walk

through menus and provide spoken words in order to try to configure a terminal. This is different from the present invention, and is exactly one of the problems the invention was meant to solve.

One of the particular aspects and benefits of the present invention is eliminating the need for the user to walk through various menus in order to select a desired configuration. As noted in the Background Section of the present Application, that exercise is often error prone, and is time-consuming, and thus, inefficient. Since a focus of the present invention is to improve efficiency of workers who utilize wearable and/or portable terminals, the Bunte, et al. reference would fall short in providing the advantages of the present invention.

Specifically, the invention is directed to having a peripheral device that generates a characterizing signal in the form of a non-speech data signal that is put into an audio format. In that way, the non-speech data signal that may provide identification information with respect to a user may be forwarded to a terminal using the audio signal line that already exists in the speech peripheral for also transporting speech signals to a terminal from the peripheral device. Therefore, the existing microphone lines of a headset, for example, may be utilized for both handling the non-speech data signal for an initial configuration for the terminal, and then later handling the speech signals for speech applications. Therefore, all a user has to do is actually connect a peripheral

device to the portable terminal, and they would not have to do anything further, such as walking through a menu manually, or speaking to the terminal and going through a menu using speech as required by Bunte, et al. The user simply couples the peripheral device to the terminal, and the peripheral device, on its own, is configured to generate a characterizing signal in the form of the non-speech data signal in an audio format so that additional lines are not necessary and the audio signal lines can be used for both data and subsequent speech.

The Bunte, et al. reference cannot do that, and does not teach such a concept to a person of ordinary skill in the art. Rather, as noted above, Bunte, et al. suffers from the same drawbacks as other prior art and requires that a user actually walk through some sort of menu or configuration process and actually provide speech to a microphone and use key words and other voice commands to go through such a menu. The discussion of the menu is set forth in Columns 11 and 12, and thus, it is clear to see in Bunte, et al. that the benefits of the invention involving a characterizing signal in the form of a non-speech data signal in an audio format are not taught or recognized in Bunte, et al.

Referring to the independent Claims, including Claims 1, 19, 29, and 40, those claims have been amended to further clarify the invention as noted herein to recite that the generated characterizing signal is in the form of a non-speech data signal in an audio format. As such, Bunte, et al. would fail to anticipate those noted independent claims, because Bunte, et al. fails to teach or even suggest the generation of a

characterizing signal by a peripheral device on its own, without any speech from a user wherein the characterizing signal is the form of a non-speech data signal that is in an audio format. Bunte, et al. also fails to recognize the specific advantages and efficiencies of such an automatic configuration without user input, and actually facilitates the basic inefficiencies associated with having the user walk through menu options to configure a terminal.

Accordingly, the Bunte, et al. reference would fail to anticipate the rejected claims under §102(a), including independent Claims 1, 19, 29, and 40, because that reference does not teach all the limitations recited in those claims. Accordingly, Claims 1, 19, 29, and 40 would be allowable over the Bunte, et al. reference. Claims 63-66 are cancelled. The dependent Claims 3-6, 9, 15-16, 18, 21-23, 26, 28, 30-31, 33, 39, 41, 44-46, 49, and 53-54 each depend from one of the respective independent claims, and also recite unique combinations of elements which would not be anticipated by the Bunte, et al. reference. Accordingly, those noted dependent claims are also in an allowable form, and currently define over the Bunte, et al. reference.

Claim Rejections Under 35 U.S.C. §103

Claims 8, 10, 13, 25, 32, 34, 37, 48, and 50 are rejected as obvious under 35 U.S.C. 103(a) by Bunte, et al., as modified by Anderson, et al. and Michel, et al.

Recognizing that the Bunte, et al. reference requires a spoken word, the Examiner refers to the Anderson, et al. and Michel, et al. references for signals of different formats, such as the DTMF signal or a PWM stream signal.

For the obviousness rejections under 35 U.S.C. §103(a), the Examiner seems to essentially have assembled a hodge-podge of different references looking at each of the claim limitations individually. It is well-established that a prima facie case of obviousness has to be based upon what the prior art in its totality would teach a person of ordinary skill in the art. Obviousness cannot be based upon a hindsight assembly of different parts and pieces from a large number of different references to somehow create the invention utilizing the claims themselves as the recipe. The Examiner has done just that, and a prima facie case of obviousness is not at all established by the cited three-reference and four-reference combinations. Accordingly, the claims are in an allowable form as discussed further hereinbelow.

The Anderson, et al. reference is referred to by the Examiner for teaching a characterizing signal associated with operational parameters. However, the teaching in Anderson, et al. is that any headset would utilize serial communications and a serial communications interface for sending and receiving memory addresses (Column 7, Lines 55-67). One advantage of the present invention as noted above is that you do not need additional lines between the peripheral device, such as a headset, for the

purposes of sending data and voice. Anderson, et al., however, teaches utilizing separate lines, some for voice and at least one for data, wherein the data lines are part of a serial communications interface. Although Anderson, et al. discusses reducing the number of wires in the headset, the teaching is specifically that any serial address and data is communicated on a separate wire, and notes that only a single wire increase is needed, rather than possibly seven wires (7). However, Anderson, et al. still does not teach features of the invention, which involve generating a characterizing signal in the form of a non-speech data signal that is in an audio format so that it may be directed to a terminal on the audio signal lines. No other separate lines are necessary. As such, Anderson, et al. actually teaches in an opposite direction to the present invention (Column 6, Lines 21-37). Recognizing that Anderson, et al. fails to teach that specific feature, the Examiner then turns to the Michel, et al. reference.

Specifically, the Examiner refers to the Michel, et al. reference and statements therein regarding connections between a speaker microphone system and a computer wherein the operation of the various different components of the speaker/microphone system might be controlled by the computer through audio lines. Specifically, the Michel, et al. invention is directed to being able to utilize video telephony hardware with a computer while, at the same time, listening to stereo music. The speaker/microphone system taught in Michel, et al. includes a digital signal processor with echo cancelling and different modes of operation. The speaker/microphone system can switch between various operating modes by detecting DTMF signals from the computer. Michel, et al.

teaches control of a speaker/microphone system from a computer, rather than the configuring of a terminal utilizing a characterizing signal that is generated and sent from a peripheral device. Therefore, Michel, et al. teaches a completely different control and operation from the present invention, wherein the peripheral device worn by a user would control the operation of the terminal that the user might be carrying.

Michel, et al. does not even recognize the problem of a user owning a peripheral, but sharing a portable terminal. Therefore, there is no recognition of the problem of matching specific peripherals with different terminals in Michel, et al. reference. Thus, to that end, Michel, et al. is pulled in by the Examiner as simply a hindsight reference wherein the Examiner tries to find various pieces of the invention (audio line signals) in different systems or components and argues that they would be combinable. Looking at the overall references of Bunte, et al., Anderson, et al., and Michel, et al., a person of ordinary skill in the art would not at all be taught the invention as set forth in the various independent claims. The three references used to establish obviousness are simply too disjointed such that the only way they would possible be considered or combined by a person of ordinary skill in the art would be due to some hindsight motivation of finding the different pieces of the claimed invention and bringing them together to somehow produce the present invention.

However, when the Bunte, et al. reference teaches in the opposite direction (i.e., user selection through a menu using voice) and the Anderson, et al. reference teaches using additional wires that are in addition to audio lines, the teaching in Michel, et al. of

computer control of a speaker/microphone system does not provide the necessary teaching to overcome the teachings away from the invention in both the Bunte, et al. and Anderson, et al. references. Therefore, the three references do not somehow come together and teach a person of ordinary skill in the art to make the invention, such that the claimed invention would be obvious over the cited art.

The combination of Anderson, et al. and Michel, et al. do not at all eliminate the need in Bunte, et al. for the user to speak his name into a microphone. That is a completely unsupported statement in the Office Action, and there is no teaching of replacing the specific key word feature of Bunte, et al. in the way the Examiner argues. As noted, Anderson, et al. teaches the use of separate data lines and also teaches the use of a host adapter between the headset and a computer. Michel, et al., as noted, only discusses using the computer for control of a speaker/microphone system, not the other way around. In fact, as noted herein, Michel, et al. teaches in the opposite direction to the claimed invention. Accordingly, the three references together do not teach, as the Examiner asserts.

Accordingly, the disjointed three-reference combination of Bunte, et al./Anderson, et al./Michel, et al. would fail to render obvious either the pending independent Claims 1, 19, 29, or 40, or any of the dependent Claims 8, 10, 13, 25, 32, 34, 37, 48, or 50 that depend from one of those independent claims. Accordingly, those dependent claims are also in an allowable form.

With respect to Claims 11, 12, 27, 35-36, and 51-52, the Examiner extends even further, and now has four references that must be relied upon for teaching the recited invention. The Examiner relies upon the Hallikainen, et al. reference for teaching an auxiliary device that can transmit an identification message automatically. However, the Hallikainen, et al. reference teaches the use of dedicated data lines for any identification code or message, and thus, again teaches away from the invention and actually teaches in the direction of the Anderson, et al. reference for example. Accordingly, the four references including Hallikainen, et al. do not provide the teaching that is lacking in the three-reference combination of Bunte, et al./Anderson, et al./Michel, et al. such that now four references would render obvious the invention as set forth in Claims 11-12, 27, 35-36, and 51-52. Accordingly, those claims are also in an allowable form.

Finally, Claims 14-38 are rejected under 35 U.S.C. §103(a) as being obvious over Bunte, et al./Anderson, et al./Michel, et al., as further combined with the reference of Helms, U.S. Patent No. 5,561,710. Helms is relied upon for essentially teaching a battery. Therefore, the addition of that reference does not provide the teachings that are lacking in the three-reference combination of Bunte, et al./Anderson, et al./Michel, et al. such that Claim 18 or 38 would be rendered obvious. Claim 18 depends from Claim 1, while Claim 38 depends from Claim 29, which are both allowable independent claims, as noted above.

In light of the foregoing, it is respectfully submitted that the present Application is in a condition for allowance and notice to that effect is hereby requested. If it is found that the present Amendment does not place the Application in a condition for allowance, Applicant's undersigned attorney requests that the Examiner initiate a telephone interview to expedite prosecution of the Application.

Applicants are submitting the fee due for the one-month extension of time. If any additional fees are necessary, the Commissioner may consider this to be a request for such and charge any necessary fees to deposit account 23-3000.

Respectfully submitted,

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